

## Claims

What is claimed is:

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Sub  
a1  
1. A system for implementing behavioral operations,  
comprising:

10 a search engine connected to an input data;

an associative match memory connected to the search engine;  
and

a behavioral operation unit connected to the associative match  
memory.

15 2. The system of claim 1, further including a field descriptor  
array connected to the associative memory.

20 3. The system of claim 1, wherein the associative match  
memory includes an association and a behavioral indicator in an  
entry.

4. The system of claim 1, wherein the associative match  
memory includes a field descriptor in an entry.

25 5. The system of claim 3, wherein the behavioral indicator  
is an association set.

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6. The system of claim 3, wherein the behavioral indicator is a qualifier set.

5 7. The system of claim 3, wherein the behavioral indicator is a test set.

8. The system of claim 7, wherein the test set includes a score field.

10 9. The system of claim 3, wherein the behavioral indicator is a stack set.

15 10. The system of claim 3, wherein the behavioral indicator is an exclusion set.

11. The system of claim 3, wherein the behavioral indicator is a continuation set.

20 12. The system of claim 2, wherein the field descriptor array includes a byte offset.

13. The system of claim 2, wherein the field descriptor array includes a mask.

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14. A method of behavioral operation of a data document, comprising the steps of:

- a) scanning an input data to find a match;
- 5 b) when a match is found determining a behavioral set associated with the match; and
- c) when the behavioral set is an association set, using an association in the match to acquire a desired information.

10 15. The method of claim 14, further including the steps of:

- d) when the behavioral set is a qualifier set, determining a field descriptor pointer;
- e) looking up a field descriptor pointed to by the field
- 15 descriptor pointer;
- f) determining a field to be examined.

16. The method of claim 15, further including the steps of:

- 20 g) determining a mask associated with the field descriptor;
- h) applying the mask to the field to form a masked field.

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17. The method of claim 16, further including the steps of:

j) transforming the masked field to determine if a second match is found;

5 l) when the second match is found, determining a second behavioral set and repeating the process.

18. The method of claim 14, further including the steps of:

10 d) when the behavioral set is a test set, determining a score with the match;

e) comparing the score to a previous score;

f) when a previous score is lower than the score, examining an test association.

15 19. The method of claim 18, wherein step (f) includes the step of pushing the test association onto an association stack.

20. The method of claim 18, further including the step of:

20 g) when a previous score is not lower than the score, ignoring the test association.

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21. The method of claim 14, further including the step of:

d) when the behavioral set is an exclusion set, removing a present association from an association stack.

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22. The method of claim 14, further including the step of:

d) when the behavioral set is a continuation set, a related association is returned and processing continues.

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23. The method of claim 14, further including the step of:

d) when the behavioral set is a stack set, continuing a search in an associative match memory for a duplicate.

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24. A method of behavioral operation of a data document comprising the steps of:

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- a) matching a pattern of data;
- b) determining a behavior set associated with the pattern; and
- c) performing an action indicated by the behavioral set.

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25. The method of claim 24, wherein step (a) further includes the steps of:

- a1) determining an icon for the pattern;
- 5 a2) performing an associative lookup using the icon to determine if a match exists.

26. The method of claim 24, wherein step (c) further includes the steps of:

- c1) storing an association;
- 10 c2) acquiring an information using the association.

27. The method of claim 24, wherein step (c) further includes the steps of:

- 15 c1) determining a new field of data to be examined.

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